



Casio RZ-1 Digital Sampling Rhythm Composer

by Bob Saydlowski, Jr.

Casio has entered the field of hi-tech drum machines with its new MIDI-compatible *RZ-1* Digital Sampling Rhythm Composer. The *RZ-1* can store 100 patterns and 20 songs. It has 12 preset drum sounds, plus the facility for four user-sampled sounds. Casio utilizes an eight-bit Pulse Code Modulation (PCM) sound source. The preset sounds are: snare, rim, toms 1, 2, & 3, open and closed hi-hats, crash cymbal, ride cymbal, claps, and cowbell. Each voice has its own push-button key. Four additional keys are for Samples 1, 2, 3, and 4.

The *RZ-1* is capable of storing a total of 0.8 seconds of sample. The memory is divided into four 0.2-second samples (hence, the sample buttons numbered 1 through 4). Depending on the length of your sample, sample banks can be linked together. For instance, a bass drum sample would use only one bank, while a crash cymbal sample would require *all four* banks. Casio provides a cassette tape containing 91 different drum and percussion sounds for use as a sampling source. This, however, is just the tip of the iceberg, as the *RZ-1* can sample *any* sound you desire, via microphone or line input. More on the sampling section later.

The *RZ-1* does not have a tuning capability for any of its voices. However, this really can't be considered a major drawback, because if you don't like some of the factory tunings, you can always sample your own.

Programming can be done in either real-time or step recording. Ten resolution settings are available, ranging from 1/2 to 1/96. These settings are selectable at a ten-button keypad, which has other uses as well, such as calling up pattern and song num-

bers, setting time signatures, and setting pattern length. In step recording there are six levels of "swing factor" (what I refer to as the "drunken drummer"). The *RZ-1* also has other functions such as copy, edit, delete, insert, and chain. Three dynamic levels are available when programming: Normal, Accent, and Mute. (The latter two have their own separate push-button keys.) Tempo is adjustable from 40 to 250 beats per minute via two small buttons, which step the tempo setting either up or down. Variations in tempo are not programmable, though. An LCD window gives pertinent info, such as pattern or song number being played or recorded, tempo setting, and other programming data. In performing certain functions, the machine will first question your command, wait for a "yes" or "no" answer, and then confirm the command upon completion.

Programming a pattern is quite simple. One button gets the *RZ-1* into record mode. Then, via the keypad, you set the pattern number (01-99). The next step is to set the auto-compensate level, again via the keypad. Then finally, set up the time signature and pattern length. When these parameters are completed, pressing "start" will begin an automatic click, and you'll be ready to type in voices for your pattern.

One drawback of programming the *RZ-1* is that notes cannot exist simultaneously for certain pairs of voices: Tom 1/2, Tom 3/Bass Drum, Rim/Snare, Claps/Ride, Cowbell/Crash, and Open HH/Closed HH. If you're attempting to play a note at the exact same time in these above pairs, only the last voice inputted will be the one heard; the other is canceled out. It's a mystery to me why Casio has let this "flaw" creep into the *RZ-1*.

During playback, you cannot manually switch patterns without going to the Stop mode first. If you need to hear continuous different pattern numbers, they must be set up into Song mode, stepping each pattern number. A button labeled "Continue Start" will restart a pattern from the exact point it was terminated.

I found that the layout of the voice buttons can cause a problem at times in real-time programming. The bass drum is at the left of the snare drum, and the toms are set up with Tom 1 at the top, Tom 2 beneath it, and Tom 3 in the next row, opposite

Tom 1. I feel that the button setup should be more like a real drumkit, so that drummers would be more comfortable using the machine.

The *RZ-1* has ten separate output volume sliders for mixing. (Since there are 16 total voices, some voices are doubled up on one control.) There is also an overall master volume slider. The back of the unit has ten separate line outputs (again, doubling up on some voices), left/right stereo outputs, a headphone jack, footswitch jack for remote operation, and MIDI In, Out, and Thru jacks. The *RZ-1* also has a high-speed cassette interface jack to store and retrieve programs on tape.

The sampling section has an input volume slider, with an LED to signal the beginning and end of sampling. A W input is provided, so you can sample off a microphone, cassette deck, synthesizer, etc. Next to the input jack is a mic/line selector switch. Two tone controls in the back of the unit can be used to adjust the highs and lows of Samples 1 to 2 and 3 to 4 during playback. I tried sampling all sorts of stuff—sounds from the Casio cassette, bass guitar, voices, live drums and cymbals, other drum machines, etc.—and found the results to be pretty well exact. If the samples had hiss or other noise, the tone controls served to help reduce it. It should be pointed out that programmed patterns that use sampled voices will change their sampled notes if you change the samples in the internal memory. For example, if you sample a gated snare drum where a high conga sample was (let's say Sample 1), you will then have the newly sampled sound in your previously programmed patterns each time a Sample 1 note is played. All in all, the sampler in the *RZ-1* works well, giving true-to-form reproductions. And let's not forget the preset voices; they're all very good digital format sounds. I do have a complaint with the abrupt decay of the crash cymbal, but that's due to a small allotted memory space.

For \$649 retail, you get a 16-voice digital drum machine with sampling capability, MIDI compatibility, and from what I'm told, a future capacity for linkup with Casio-made *drumpads* for live performance. In total, this is a pretty impressive package.

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